APPLICATION REVIEW

AND DETERMINATION OF INITIAL COMPLIANCE

FOR:

NEWMONT MINING CORPORATION

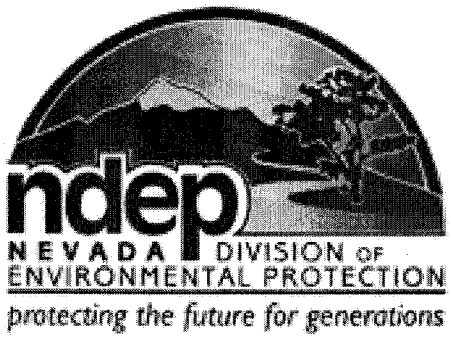
Elko County, Nevada; HA – 51

Class I (Title V) Air Quality Operating Permit

AP1041-0793 (Minor Revision)

FIN A0002, Gold Quarry Operations Area

Air Case #7542



BY

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR POLLUTION CONTROL

SARAH SMITH
STAFF 2 ASSOCIATE ENGINEER

AUGUST 2013

REVISED OCTOBER 2013

1.0 INTRODUCTION

On June 6, 2013, Newmont Mining Corporation – Gold Quarry Operations Area (NMC) submitted an application for a minor revision to System 85 and System 87 in Class I Air Quality Operating Permit, AP1041-0793. The Nevada Division of Environmental Protection – Bureau of Air Pollution Control (BAPC) determined NMC's application administratively complete on June 20, 2013. On July 30, 2013, a Request for Additional Information Letter was issued to NMC addressing moisture sampling to support the use of AP-42, 11.24, emission factors. Subsequently a meeting between the BAPC and NMC took place on 9/4/2013. As a result of that meeting, NMC provide the BAPC with a justification to use AP-42, Section 13.2.4.3, emission factors for this minor revision of Systems 85 and 87, see letter dated 9/12/2013. On 9/25/2013, via email, NMC provide the BAPC with revised application pages to continue processing the minor revision.

NMC is accessed from I-80 at Exit 280 (State Route 766), 6 miles northwest of Carlin, Nevada. NMC is located within Section 13, T33N/T34N, R51E/52E; Sections 19/29/30/32, T35N, R50E/R51E. NMC is located in Hydrographic Area (HA) 51. HA 51, Maggie Creek Area, is currently unclassified for PM_{10}, NO_X, CO, SO_2, O_3, and lead criteria pollutants, which have an ambient air quality standard.

The Standard Industrial Classification (SIC) code for this facility is 1041 (Gold Ore Processing).

1.1 PROPOSED MODIFICATIONS

A description of the complete NMC operation was detailed with the Class I Air Quality Operating Permit that was issued February 25, 2004. This minor revision review will only address the proposed revisions.

1.1.1 System 85 – Underground Ore Receiving System (PF1.048)
System 86 – Underground Ore Metal Removal Plant (S2.220 – S2.223) [Associated System]
System 87 – Ore Stockpile Drops (PF1.049 – PF1.050)

NMC proposes to increase the annual throughput limit from 1,500,000 tons/yr to 3,000,000 tons/yr (the hourly rate will not be changed) for System 85 and System 87. The proposed requested increase of throughput will change emissions as follows: [Note: Updated facility data, used to calculate emissions, resulted in a decrease in hourly (lb/hr) emissions for both PM and PM10.]

- PM emission changes:
  - System 85 - 1.92 lb/hr to 1.37 lb/hr and 1.44 tons/yr to 2.06 tons/yr
  - System 87 - 1.92 lb/hr to 1.37 lb/hr and 1.44 tons/yr to 2.06 tons/yr (combined)
- PM10 emissions changes:
  - System 85 – 0.672 lb/hr to 0.65 lb/hr and 0.504 tons/yr to 0.97 tons/yr
  - System 87 - 0.672 lb/hr to 0.65 lb/hr and 0.504 tons/yr to 0.97 tons/yr (combined)
- System 86 will have no changes in operation or emissions.

NAC445B.22033, a Federally Enforceable SIP Requirement, defines the maximum allowable emission rate for Particulate Matter < 10 microns in diameter (PM_{10}). NAC445B.22033 only applies to PM_{10} and has superseded SIP 445.732, which applied to Particulate Matter > 10 microns in diameter (PM). This minor revision required an update of the PM_{10} maximum allowable emission rate for System 86. The previously permitted limit of 310.35 lb/hr for PM_{10} was incorrect and after using the calculation required by NAC445B.22033.3 it has been determined that the correct maximum allowable emission rate should be 77.59 lb/hr for PM_{10}. This does not affect the PM_{10} emission limit of 0.776 lb/hr, which the facility is currently and will remain subject to following this revision.

2.0 APPLICABLE REGULATIONS

Applicable requirements are those regulatory requirements that apply to a stationary source or to emissions units contained within the stationary source. In Nevada's program, the regulations governing the emissions of air pollutants from which the applicable requirements originate are derived from four categories of regulations. These four categories consist of the requirements contained in the Nevada Revised Statute (NRS), the Nevada Administrative Code (NAC), the Applicable State Implementation Plan (ASIP), and the Code of Federal Regulations (CFR, contained in various Parts within Title 40).

2.1 NEVADA REVISED STATUTES

The Nevada Revised Statutes (NRS) are the current codified laws of the State of Nevada. The NRS is the statutory authority for the adoption and implementation of administrative regulations. The statutes relating to the control of air pollution are contained in Title 40, Public Health and Safety, Chapter 445B, Air Pollution, NRS 445B.100 through NRS 445B.640. The NRS specifies that the State Environmental Commission is the governing body given the power to adopt administrative regulations. Because the NRS is the enabling statutory authority, very few specific requirements are contained in the statutes. Rather, the NRS provides, generally, broad authority for the adoption and implementation of air pollution control regulations. The NMC facility will be subject to the NRS and will need to comply with all applicable regulations under the NRS. The NRS may be viewed at the following website:
http://www.leg.state.nv.us/NRS/Index.cfm

2.2 NEVADA ADMINISTRATIVE CODE

The Nevada Administrative Code (NAC) contains the regulations that have been adopted by the State Environmental Commission (SEC), pursuant to the authority granted by the Nevada Revised Statutes (NRS), relating to the control of air pollution. The NAC requires that, where State regulations are more stringent in comparison to Federal regulations, the State regulations are applicable. The NAC sets forth, by rule, maximum emission standards for visible emissions (opacity), PM_{10} (particulate matter less than 10 microns in diameter) and sulfur emitting processes. Other requirements are established for incinerators, storage tanks, odors and maximum concentrations of criteria air pollutants in the ambient air. Other NAC regulations specify the requirements for applying for and method of processing applications for operating permits. All the equipment considered in this application must meet, at a minimum, the applicable standards and requirements set forth in the NAC, specifically, the emission standards contained in NAC 445B.22027 through 445B.22033 for particulate matter, 445B.2204 through 445B.22047 for sulfur emissions, 445B.22017 for opacity, and the Nevada Ambient Air Quality Standards as set forth in NAC 445B.310 through 445B.311. The NAC may be viewed at the following website:
http://www.leg.state.nv.us/NAC/CHAPTERS.HTMl

2.3 NEVADA APPLICABLE STATE IMPLEMENTATION PLAN

The Applicable State Implementation Plan (ASIP) is a document that is prepared by a state or local air regulatory agency and required to be submitted to the U.S. EPA for approval. Title I of the Clean Air Act is the statutory authority for the U.S. EPA regulations that require a State to submit an ASIP. The contents of the ASIP are intended to show how a state, through the implementation and enforcement of the regulations contained in the ASIP, will either show how attainment of the national ambient air quality standards (NAAQS) will be achieved or how a state will continue to maintain compliance with the NAAQS.

2.0 APPLICABLE REGULATIONS (continued)

2.4 CODE OF FEDERAL REGULATIONS

The Code of Federal Regulations (CFR) are regulations adopted by the U.S. EPA and published in the Federal Register pursuant to the authority granted by Congress in the Clean Air Act. The CFR addresses multiple aspects, including but not limited to, permitting requirements, performance standards, testing methods, and monitoring requirements. The CFRs may be viewed online at the following website: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=%2Findex.tpl

2.5 CODE OF FEDERAL REGULATIONS (continued)

2.5.1 NEW SOURCE PERFORMANCE STANDARDS

Section 111 of the Clean Air Act, "Standards of Performance of New Stationary Sources," (NSPS) requires EPA to establish federal emission standards for source categories which cause or contribute significantly to air pollution. Each NSPS defines the facilities subject to these requirements and prescribes emission limits for specified pollutants, compliance requirements, monitoring requirements, and test methods and procedures. These standards are intended to promote use of the best air pollution control technologies, taking into account the cost of such technology and any other non-air quality, health, and environmental impact and energy requirements. These standards apply to sources which have been constructed or modified since the proposal of the standard. Since December 23, 1971, the Administrator has promulgated 88 such standards and associated test methods. These standards can be found in the CFR at Title 40 (Protection of Environment), Part 60 (Standards of Performance for New Stationary Sources).

Generally, state and local air pollution control agencies are responsible for implementation, compliance assistance, and enforcement of the NSPS. EPA retains concurrent enforcement authority and is also available to provide technical assistance when a state or local agency seeks help. EPA also retains a few of the NSPS responsibilities such as the ability to approve alternative monitoring methods to maintain a minimum level of national consistency.

NMC is subject to NSPS Subpart LL requirements.

2.5.2 FEDERAL NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)

NESHAP for hazardous air pollutants (HAPs) are established in the CFR pursuant to Section 112 of the Clean Air Act Amendments of 1990. These standards regulate air pollutants that are believed to be detrimental to human health. The NESHAP program applies to all sources, both existing and new. These standards are codified in Title 40 CFR Parts 61 and 63.

Part 61, which predates the Clean Air Act Amendments of 1990, includes specific standards, reporting and recordkeeping requirements, and test methods for the initial eight hazardous air pollutants: asbestos, benzene, beryllium, coke oven emissions, inorganic arsenic, mercury, radionuclides, and vinyl chloride. The regulations covering these eight hazardous air pollutants focused on health-based considerations. NESHAPs were established for certain operations that commonly emit the eight hazardous air pollutants.

Other substances were included for consideration due to the serious health effects, including cancer, which may occur from ambient air exposure to those substances. However, no specific restrictions were placed on facilities that used or released these compounds.

2.0 APPLICABLE REGULATIONS (continued)

2.5 CODE OF FEDERAL REGULATIONS (continued)

2.5.2 FEDERAL NESHAP (CONTINUTED)

Under the Clean Air Act Amendments of 1990, Congress greatly expanded the Air Toxics program, creating a list of 189 substances to be regulated as hazardous air pollutants. Rather than regulating individual pollutants by establishing health-based standards, the new Air Toxics program granted EPA the authority to regulate specific industrial major source categories with NESHAPs based on maximum achievable control technology (MACT) for each source category. Thus, a number of NESHAPs have been established to regulate specific categories of stationary sources that emit (or have the potential to emit) one or more hazardous air pollutants.

The standards in 40 CFR Part 63 are independent of the NESHAPs contained in 40 CFR Part 61 which remain in effect until they are amended, if appropriate, and added to this part. More information on NESHAPs can be found at the EPA Unified Air Toxics Website (http://www.epa.gov/ttn/atw/).

NESHAPs may cover both major sources and area sources in a given source category. Major sources are defined as those facilities emitting, or having the potential to emit, 10 tons per year or more of one Hazardous Air Pollutant (HAP) or 25 tons per year or more of multiple HAPs. Major sources are required to comply with MACT standards. Area Sources are defined as those facilities that are not major sources.

NMC is not subject to any NESHAP standards for this minor revision.

2.5.3 PREVENTION OF SIGNIFICANT DETERIORATION DETERMINATION

The Prevention of Significant Deterioration (PSD) permitting program is a Clean Air Act permitting program for new and modified major stationary sources of air pollution. Implementation of the federal PSD regulations is delegated to the State of Nevada by U.S. EPA and these regulations are contained at 40 CFR Part 52.21. Therefore, BAPC implements the federal PSD regulations directly. These regulations specify federally required permitting procedures for each "major stationary source".

"Major" is defined as the potential to emit of a stationary source, which equals or exceeds a specified threshold (in tons per year) of any air pollutant regulated under the Clean Air Act (40 CFR 52.21(b)(1)). The first threshold is for a stationary source that emits or has the potential to emit 100 tons per year or more of any regulated NSR pollutant and is defined as one of 28 specific categories of sources (see 40 CFR 52.21(b)(1)(i)(a)). The other applicability threshold is for any other stationary source that emits or has the potential to emit 250 tons per year of any regulated NSR pollutant (see 40 CFR 52.21(b)(1)(i)(b)).

NMC is an existing major stationary source for several pollutants (see Section 3.0). NMC's Title V renewal permit was received on June 30, 2008 (in process). Since then, various applications for revision to the Title V permit have been processed. No previous application for revision has triggered PSD permitting requirements, nor has there been a determination that any of those projects require aggregation.

2.0 APPLICABLE REGULATIONS (continued)

2.5 CODE OF FEDERAL REGULATIONS (continued)

2.5.3 PREVENTION OF SIGNIFICANT DETERIORATION DETERMINATION (continued)

For the purposes of determining whether a project or group of related projects would have a significant net emissions increase, current NSR rules say that a group of related modifications must be aggregated to establish the PTE for the project. The BAPC has determined that project aggregation is not required for the current permit action, because the proposed revisions are not related to any other past modifications of NMC's Title V permit.

In its permit application, NMC submitted an analysis of the change in emissions resulting from the proposed action using the two-year (24-month) period January 2011 through December 2012 (for Systems 85 – 87) as the baseline for actual production throughput. The BAE is based on actual production throughputs in the baseline periods, whereas PAE is based on the proposed operating throughputs. The potential emissions increase (PEI) is calculated by subtracting the BAE from the PAE.

As shown below in **Table 2.5.3-1**, the proposed minor revision will not result in any increases in an applicable criteria pollutant in excess of the Significant Emission Thresholds [re: 40 CFR 52.21(b)(23)(i)] for PSD/NSR review purposes.

Emissions of GHG's are not impacted by this permit revision, nor are emissions of HAPs.

Based on these considerations, NMC - GQ's minor revision permit application is minor for PSD; no other permitted operating conditions need to be revised to ensure that the proposed action constitutes a minor modification.

Table 2.5.3-1: Summary of PSD Applicability Analysis
Newmont Mining Corporation - Gold Quarry - June 2013 Application for Minor Revision

Pollutant	PAE (System 85) (tons/yr)	PAE (System 87) (tons/yr)	PAE (System 86) (tons/yr)	BAE (System 85) (tons/yr)	BAE (System 87) (tons/yr)	BAE (System 86) (tons/yr)	Total PEI (tons/yr)	PSD Significance Level (SEI) (tons/yr)
PM	2.06	2.06	3.40	0.62	0.62	0.67	5.60	25
PM_{10}	0.97	0.97	3.40	0.29	0.29	0.67	4.09	15
$PM_{2.5}$	0.15	0.15	0.96	0.04	0.04	0.19	0.98	10

Note: Total PEI for each regulated NSR pollutant is below the PSD Significance Level for that pollutant. Therefore, Gold Quarry's June 2013 application qualifies as a PSD minor revision.

2.5.4 COMPLIANCE ASSURANCE MONITORING (CAM) – 40 CFR Part 64

Compliance Assurance Monitoring (CAM) plans are required for major sources required to obtain Title V (Part 70 or 71) permits. The CAM rule was signed on October 3, 1997 and came into effect on November 21, 1997. The U.S. EPA developed the CAM rule to focus on monitoring of certain operating parameters to ensure compliance with emission limitations in-between scheduled source tests. CAM requirements apply to stationary sources that: (1) are equipped with post-process pollutant control devices; (2) have pre-control device emissions equal to or greater than 100% of the major source threshold for a pollutant; and (3) are subject to the Title V permit program.

The BAPC has determined that NMC is not required to submit a CAM plan at this time.

3.0 EMISSIONS INVENTORY

3.1 PROPOSED EMISSIONS

The facility-wide emissions inventory summary for the NMC, is presented in Table 3.1-1. As can be seen, the PTE for PM and PM_{10}, indicates that NMC is a major stationary source for these pollutant, since the PTE exceeds the PSD major source threshold of 250 tpy. All other regulated pollutants (except VOC's) are over 100 tons per year. $PM_{2.5}$ emissions are not included in the inventory, nor are $PM_{2.5}$ limits set forth in the draft Permit, because the BAPC has not yet adopted $PM_{2.5}$ into the Nevada Administrative Code.

Table 3.1-1
Newmont Mining Corporation - Gold Quarry Operations Area
Changes to Class I Facility Wide Potential to Emit (PTE) October 2013

System	Annual Emission (tons/yr)					
	PM	PM_{10}	SO_2	NO_X	CO	VOC
Facility Wide PTE - Class I AP1041-0793; Class I OPTC AP1041-2971 (excluding minor rev)	516.67	335.49	221.115	244.51	195.96	38.60
Total Facility Wide PTE (Class I, Class I OPTC, minor mod)	**516.46**	**335.92**	**221.12**	**244.51**	**195.96**	**38.60**
Net Change	-0.21	0.43	0	0	0	0

4.0 AMBIENT AIR IMPACT ANALYSIS

4.1 INTRODUCTION/ PURPOSE

The purpose of this analysis is to determine the likely air quality impacts resulting from operation of NMC after the changes to System 85 (PF1.048) and System 87 (PF1.049 – PF1.050)

4.2 CLASSIFICATION OF AIR BASIN

NMC is located in Air Quality Hydrographic Basin (HA) 51, Maggie Creek Area. HA 51 is currently unclassified for all criteria pollutants. The unclassifiable designation has been developed due to lack of available monitoring data to properly classify the air basin. HA 51 is not triggered for PSD increment.

4.3 AIR QUALITY MODELING ANALYSIS

4.3.1 AIR DISPERSION MODEL

The BAPC performed the requisite air dispersion modeling analysis, to determine likely air quality impacts for the proposed operation, using Lakes Environmental's *AERMOD-View* graphical-user interface to input source information, generate receptors, and to actually run AERMOD (v. 12345). The model included emission units already permitted in NMC's Class I Permit AP1041-0793, the three new retorts added with the recent OPTC AP1041-2971, and revised Systems 85 and 87.

4.3.2 AVERAGING PERIODS

The BAPC modeled only for the criteria pollutants, which would increase as a result of the modifications of System 85 and System 87. This included only PM_{10} (24-hour, Annual) emissions. The Nevada Ambient Air Quality Standards (AAQS) are listed in Table 4.4-1 and include model results generated by the BAPC. Demonstration of compliance with the Nevada AAQS is done by modeling the highest-first-high (H1H) concentration for each pollutant for short-term averaging periods. A demonstration of compliance with the $PM_{2.5}$, 1-hour SO_2, and 1-hour NO_2 standards are not yet required, because the BAPC has not yet adopted these standards into the Nevada Administrative Code.

4.3.3 SOURCE PARAMETERS

Source input parameters were provided by NMC. No hour-of-day scalars (HROFDY) were used in the modeling. All emission sources were modeled at their maximum (or higher) hourly emission rates. All emission sources were referenced to the UTM NAD 83 project datum, as were buildings, fenceline corners, and receptors. For PM_{10} modeling, there were numerous point and volume sources in the model.

4.3.4 RECEPTORS

Plant boundary receptors were spaced at 25 meter intervals, with a proximal, uniform Cartesian, "fenceline" receptor array spaced at 100 meter intervals, out to a distance of 1500 meters from the boundary of the project or 8,500 meters from the all project emission sources, whichever is greater. A total of 5,561 receptors were included in the model.

4.3.5 METEOROLOGICAL DATA

One-year of on-site meteorological data (09/01/03 – 08/31/04 – collected by Newmont Nevada Energy Investment, LLC from its TS Power Plant Site) was used for modeling. Elko upper air data was also used for this time period. Due to NMC's close proximity to TS Power, (approximately 16 miles) the use of the one-year of on-site meteorological data from TS-Power for air dispersion modeling will satisfy EPA and NAC requirements (NAC 445B.311) for met data.

4.0 AMBIENT AIR IMPACT ANALYSIS (CONTINUED)

4.3.6 BUILDING DOWNWASH

In accordance with current U.S. EPA and BAPC guidelines, building downwash was considered for all model runs. Building downwash effects were evaluated using the BPIP-PRIME algorithm to calculate projected building heights and widths for each point source in the model. This information is used by AERMOD to determine whether plume dispersion from a particular point source will be influenced by building downwash. In general, building downwash will cause the model to generate higher pollutant concentrations at the closest point of public access.

4.3.7 TERRAIN

AERMOD requires that elevated terrain be considered in air dispersion modeling analyses. Therefore, elevations were processed in AERMAP (v. 11103) using the NAD 27 DEM files for the HUNTSMAN RACH (8234_75m.dem), RODEO CREEK (8235_75m.dem), SCHROEDER MOUNTAIN (8240_75m.dem), SWALES MOUNTAIN (8241_75m.dem), SWALES MOUNTAIN NW (8241_75m.dem), WELCHES CANYON (8241_75m.dem), CARLIN EAST (9625_75m.dem), CARLIN WEST (9626_75m.dem), and the EMIGRANT PASS (9626_75m.dem) 7.5-minute U.S.G.S. quadrangles. AERMAP performed the necessary conversions between the NAD 27 DEM datum and the NAD 83 project datum.

4.3.8 BACKGROUND CONCENTRATIONS

The BAPC does not operate any ambient monitoring sites in the vicinity of NMC. Therefore, PM_{10} backgrounds of 10.2 $\mu g/m^3$ and 9 $\mu g/m^3$ were used for the 24-hour and annual averaging periods, respectively.

4.4 AIR QUALITY IMPACT ASSESSMENT

Results of air dispersion modeling are presented in Table 4.4-1. As can be seen, operation of NMC with the proposed changes to System 3 (S2.001 – S2.013) will not result in violations of the Nevada AAQS, because the total impacts are less than the applicable AAQS values.

Table 4.4-1

Newmont Mining Corporation - Gold Quarry Operations Area - Minor Revision Class I AP1041-0793

BAPC Model - Ambient Air Quality Impact Analysis - March 2013

Pollutant	AAQS Averaging Period	NBAPC Check Model Met Year[3]	NBAPC Model Maximums[1]	Backgr. Conc.[2]	NBAPC Total Impact	AAQS	NBAPC Percent of Standard
			µg/m3	µg/m3	µg/m3	µg/m3	%
PM_{10}	24-hr	2003 - 2004	27.76	10.2	38.0	**150**	25.31%
	Annual	2003 - 2004	3.4	9	12.4	**50**	24.80%

[1] Note all first high's used

[2] PM10 backgrounds of 10.2 µg/m3 and 9 µg/m3 were used for the 24-hour and annual averaging periods, respectively.

[3] TS POWER 09/03-08/04 On-Site Meteorological Data used

5.0 CONCLUSIONS / RECOMMENDATIONS

Based on the above review and supporting data and analyses, operation of NMC, under the draft permit conditions, will not result in violations of any applicable ambient air quality standards. The BAPC has determined that this minor revision will not result in a significant change in air quality at any location where the public is present on a regular basis. Because this revision will not result in a significant change in the air quality, pursuant to NAC 445B.3395(8)(c) the provisions of NAC 445B.3395(6) and NAC 445B.3395(7), public notice provisions, do not apply. Therefore, we recommend that the draft facility-wide operating permit be formally issued, with those applicable requirements, conditions, and restrictions contained therein.

Appendix 1 - BAPC Draft Class I AP1041-0793 (Minor Revision)
Appendix 2 - Process Flow Diagram
Appendix 3 - Emission Spreadsheets

Sarah Smith, Staff II Associate Engineer — Date: 11/1/13

Jeffrey Kinder, P.E.
Supervisor, Permitting Branch
Bureau of Air Pollution Control — Date: 11/1/2013

Appendix 1

BAPC Draft Class I AP1041-0793 (Minor Revision)

Newmont Mining Corporation – Gold Quarry Operations Area

October 2013

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, as Permittee

Emission Unit List (continued):

PRAXAIR OXYGEN PLANT

CF. System 84 - Oxygen Plant Regenerative Heater

S	2.400	Oxygen Plant Regenerative Heater (Model & Serial #'s not provided by Facility)

METAL REMOVAL PLANT

CG. System 85 – Underground Ore Receiving System (Added on December 6, 2007)

PF	1.048	Underground Ore Receiving System

CH. System 86 – Metal Removing System (Added on December 6, 2007)

S	2.220	Vibratory grizzly discharge to metal removal conveyor #1
S	2.220.1	Vibratory grizzly discharge to inclined belt feeder
S	2.221	Metal removal conveyor #1 discharge to metal removal conveyor #2
S	2.222	Metal removal conveyor #2 discharge to transfer conveyor #3
S	2.223	Transfer conveyor #3 discharge to radial stacker

CI1. System 87a – Ore Stockpile Drops (Added on December 6, 2007)

PF	1.049	Radial stacker discharge to undersize stockpile

CI2. System 87b – Ore Stockpile Drops (Added on December 6, 2007)

PF	1.050	Inclined belt feeder discharge to oversize stockpile

PHOENIX SAMPLE PREP LAB

CJ. System 88 – Phoenix Prep Room Laboratory Crusher System (Added August 24, 2009)

S	2.226	Primary Crusher (858 CR-91)
S	2.227	Primary Crusher (858 CR-92)
S	2.228	Secondary Crusher (858 CR-93)
S	2.229	Secondary Crusher (858 CR-94)
S	2.230	Secondary Crusher (858 CR-95)
S	2.231	Secondary Crusher (858 CR-96)

CHUKAR UNDERGROUND SHOTCRETE PLANT

CK. System 89 – Shotcrete Lime/Cement/Fly Ash Silo

S	2.232	Lime/cement/fly ash silo, loading
PF	1.053	Lime/cement/fly ash silo and discharge to hopper C-1

CL. System 90 – Aggregate Loading

PF	1.054	Coarse/fine aggregate loading to hopper C-3

CM. System 91 – Aggregate Hopper

PF	1.055	Hopper C-3 and discharge to mixing hopper C-2 via totally enclosed feed auger

CN. System 92 – Lime/Cement/Fly Ash Hopper

PF	1.056	Lime/cement/fly ash hopper C-1 and discharge to mixing hopper C-2 via totally enclosed feed auger

CO. System 93 – Mixing Hopper

PF	1.057	Mixing hopper C-2 and discharge to truck via totally enclosed truck mixing auger

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VI. Specific Operating Conditions (continued)

CG. Emission Unit # PF1.048 North 4515.36 km, East 567.70 km, UTM (Zone 11, NAD 83)

CG. System 85 – Underground Ore Receiving System (Added on December 6, 2007)		
PF	1.048	Underground Ore Receiving System

1. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Air Pollution Equipment
   a. **PF1.048** has no add on controls.

2. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Emission Limits
   a. On and after the date of startup of **PF1.048,** the permittee will not discharge or cause the discharge into the atmosphere from **PF1.048**, the following pollutants in excess of the following specified limits:
      i. NAC 445B.305 *Part 70 Program* - The discharge of PM_{10} (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed **0.65** pound per hour, nor more than **0.97** ton per year, based on a 12-month rolling period.
      ii. NAC 445B.22033 Federally Enforceable SIP Requirement – The maximum allowable discharge of PM_{10} to the atmosphere will not exceed **77.59** pounds per hour.
      iii. NAC 445B.305 *Part 70 Program* - The discharge of PM (particulate matter) to the atmosphere will not exceed **1.37** pounds per hour, nor more than **2.06** tons per year, based on a 12-month rolling period.
      iv. NAC 445B.22017 Federally Enforceable SIP Requirement – The opacity from **PF1.048** will not equal or exceed 20%.
   b. New Source Performance Standards (NSPS) – Subpart LL – Standards of Performance for Metallic Mineral Processing Plants (40 CFR Part 60.380)
      On and after the sixtieth day after achieving the maximum production rate at which **PF1.048** will be operated, but not later than 180 days after initial startup, the permittee will not discharge or cause the discharge into the atmosphere, the following pollutants in excess of the following specified limits:
      i. Process fugitive emissions from **PF1.048** will not exceed 10 percent opacity (40 CFR Part 60.382(b)).
      ii. The opacity standard set forth in this part shall apply at all times except during periods of startup, shutdown, and malfunction (40 CFR Part 60.11(c)).
      iii. At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate **PF1.048** including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions (40 CFR Part 60.11(d)).

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VI. Specific Operating Conditions (continued)

CG. Emission Unit # PF1.048 (continued)

3. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Operating Parameters
   a. The maximum allowable throughput rate for **PF1.048** will not exceed **1000.0** tons of **as fed ore** per any one-hour period.
   b. The maximum annual throughput rate for **PF1.048** will not exceed **3,000,000.0** tons of **as fed ore** per year, based on a 12-month rolling period.
   c. Hours
      PF1.048 may operate **8760** hours per year.

4. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   a. Monitoring, Record keeping and Compliance
      The Permittee, upon issuance of this operating permit will:
      i. Monitor and record the throughput rate of as fed ore for **PF1.048** as the combined rate of the bucket loads at **PF1.050** and the belt scale located at **S2.223** on a daily basis.
      ii. Monitor and record the hours of operation for **PF1.048** on a daily basis.
      iii. Monitor and record the throughput rate of as fed ore for **PF1.048** on a cumulative monthly basis, for each 12-month rolling period.
      iv. The required monitoring established in (i.) through (iii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.048** is operating:
         a. The calendar date of any required monitoring.
         b. The total daily throughput rate of as fed ore, in tons, for the corresponding date.
         c. The total daily hours of operation for the corresponding date.
         d. The corresponding average hourly throughput rate of as fed ore, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
         e. The cumulative monthly throughput rate of as fed ore, for each 12-month rolling period.

5. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Shielded Requirements

   No Shielded Requirements

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VI. Specific Operating Conditions (continued)

CH. Emission Units #'s S2.220 – S2.223 North 4515.36 km, East 567.70 km, UTM (Zone 11, NAD 83)

CH. System 86 – Underground Ore Metal Removal Plant (Added on December 6, 2007)		
S	2.220	Vibratory grizzly discharge to metal removal conveyor #1
S	2.220.1	Vibratory grizzly discharge to oversize inclined belt feeder
S	2.221	Metal removal conveyor #1 discharge to metal removal conveyor #2
S	2.222	Metal removal conveyor #2 discharge to transfer conveyor #3
S	2.223	Transfer conveyor #3 discharge to radial stacker

1. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Air Pollution Equipment
   a. Emissions from **S2.220 – S2.223** each, shall be ducted to a control system consisting of **Baghouse (MRB-01)** with 100% capture and a combined maximum volume flow rate of **9,056** dry standard cubic feet per minute (DSCFM). The volumetric flow rate may be determined by utilizing Method 2 - *Determination of Stack Gas Velocity and Volumetric Flow Rate* as referenced in 40 CFR Part 60, Appendix A.

2. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Emission Limits
   a. On and after the date of startup of **S2.220 – S2.223,** the permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of **(MRB-01)**, the following pollutants in excess of the following specified limits:
      i. NAC 445B.305 *Part 70 Program* - The discharge of PM_{10} (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed **0.776** pound per hour, nor more than **3.39** tons per year, based on a 12-month rolling period.
      ii. NAC 445B.22033 Federally Enforceable SIP Requirement – The maximum allowable discharge of PM_{10} to the atmosphere will not exceed **77.59** pounds per hour.
      iii. NAC 445B.305 *Part 70 Program* - The discharge of PM (particulate matter) to the atmosphere will not exceed **0.776** pound per hour, nor more than **3.39** tons per year, based on a 12-month rolling period.
      iv. NAC 445B.22017 Federally Enforceable SIP Requirement – The opacity from the exhaust stack of **Baghouse (MRB-01)** will not equal or exceed 20%.
   b. New Source Performance Standards - Subpart LL-Standards of Performance for Metallic Mineral Processing Plants (40 CFR Part 60.380)
      On and after the sixtieth day after achieving the maximum production rate at which **System 86** will be operated, but not later than 180 days after initial startup, the permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of **Baghouse (MRB-01)**, the following pollutants in excess of the following specified limits:
      i. Emissions of particulate matter in excess of 0.05 grams per dry standard cubic meter **(1.7 lb/hr)** (40 CFR Part 60.382(a)(1)).
      ii. At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate **S2.020 - S2.223** each including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions (40 CFR Part 60.11(d)).

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VI. Specific Operating Conditions (continued)

CH. Emission Units #'s S2.220 – S2.223 (continued)

3. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Operating Parameters
   a. The maximum allowable throughput rate for **S2.220 – S2.223** each, will not exceed **1,000.0** tons of **as fed ore** per any one-hour period.
   b. Hours
      S2.220 – S2.223 each, may operate **8760** hours per year.

4. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   a. Monitoring, Record keeping and Compliance
      The Permittee, upon issuance of this operating permit will:
      i. Monitor and record the throughput rate of as fed ore, in tons for **S2.220 – S2.223** each, as the combined rate of the bucket loads at **PF1.050** and the belt scale located at **S2.223** on a daily basis.
      ii. Monitor and record the hours of operation for **S2.220 – S2.223** each, on a daily basis.
      iii. Conduct and record an annual check of all bags contained in **Baghouse (MRB-01)**.
      iv. Conduct and record a weekly reading of differential pressure on **Baghouse (MRB-01)**, and verify that they are within the range established by the baghouse manufacturer; record the time of the reading and the differential pressures. **S2.220 – S2.223** each, will not be operated when the baghouse differential pressure falls outside the range established in the operation and maintenance guidelines.
      v. The required monitoring established in (i.) through (iv.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **S2.220 – S2.223** each, are operating:
         (a) The calendar date of any required monitoring.
         (b) The total daily throughput rate of as fed ore, in tons, for the corresponding date.
         (c) The total daily hours of operation for the corresponding date.
         (d) The corresponding average hourly throughput rate of as fed ore, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
         (e) The results of the weekly differential pressure readings for **Baghouse (MRB-01)**.
         (f) Records and results of the annual check of bags contained in **Baghouse (MRB-01)**.

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VI. Specific Operating Conditions (continued)

CH. Emission Units #'s S2.220 – S2.223 (continued)

4. NAC 445B.3405 (NAC 445B.316) *Part 70 Program* (Continued)
   b. Performance/Compliance Testing
   Within 60 days from the date of expiration of this permit, but no earlier than 365 days from the date of expiration of this permit, the permittee will:
      i. Conduct and record the following performance tests on the exhaust stack of **(Baghouse MRB-01)** consisting of three valid runs at the maximum throughput rate subject to CH.3.a. of this section.
         (1) A Method 201A and Method 202 test in accordance with 40 CFR Part 51, Appendix M (or an alternative EPA reference method approved by the director) for PM_{10}.
         (2) A Method 5 test with back-half catch in accordance with 40 CFR Part 60, Appendix A (or an alternative EPA reference method approved by the director) for PM.
      ii. The Method 201A and Method 202 tests required in CH.4.b.i. of this section may be replaced by a Method 5 test which includes the back-half catch. All particulate captured in the Method 5 tests with back-half performed under this provision shall be considered PM_{10} emissions for determination of compliance with the emission limitations established in CH.2. of this section.
      iii. Performance tests required under CH.4.b.i. of this section that are conducted below the maximum allowable throughput, as established in CH.3.a. of this section, shall be subject to the director's review to determine if the throughput during the performance tests were sufficient to provide adequate compliance demonstration. Should the director determine that the performance tests do not provide adequate compliance demonstration then, the director may order additional performance testing for the purpose of a compliance demonstration.
      iv. Conduct and record a Method 9 visible emissions reading on the exhaust stack of **(Baghouse MRB-01)** concurrent with one of the three required Method 5 or Method 201A and Method 202 performance tests. Visible emissions reading shall use the procedures contained in 40 CFR Part 60, Appendix A, Method 9. The visible emissions reading must be conducted by a certified visible emissions reader for a period of 6-minutes. The opacity readings must be averaged such that compliance with a 6-minute average is determined.
      v. Tests of performance and visible emissions readings must be conducted under such conditions as the director specifies to the permittee based on representative performance of the affected facility. The permittee shall make available to the director such records as may be necessary to determine the conditions of the tests of performance and visible emissions readings. Operations during periods of start-up, shutdown and malfunction must not constitute representative conditions of tests of performance and visible emissions readings unless otherwise specified in the application standard (NAC 445B.252.3).
      vi. The permittee shall give notice to the director 30 days before the tests of performance and visible emissions readings to allow the director to have an observer present. A written testing procedure for the tests of performance and visible emissions reading must be submitted to the director at least 30 days before the tests of performance and visible emissions readings to allow the director to review the proposed testing procedures (NAC.445B.252.4).

5. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Shielded Requirements

   No Shielded Requirements

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VI. Specific Operating Conditions (continued)

CI1. Emission Units # PF1.049 North 4515.36 km, East 567.70 km, UTM (Zone 11, NAD 83)

CI1. System 87a – Ore Stockpile Drops (Added on December 6, 2007)		
PF	1.049	Radial stacker discharge to undersize stockpile

1. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Air Pollution Control Equipment
   a. **PF1.049** has no add on controls.

2. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Emission Limits
   a. On and after the date of startup of **PF1.049**, the permittee will not discharge or cause the discharge into the atmosphere from **PF1.049**, the following pollutants in excess of the following specified limits:
      i. NAC 445B.305 *Part 70 Program* - The discharge of PM_{10} (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed the limits specified in **Section VII.B.1**of this operating permit.
      ii. NAC 445B.22033 Federally Enforceable SIP Requirement – The maximum allowable discharge of PM_{10} to the atmosphere will not exceed **77.59** pounds per hour.
      iii. NAC 445B.305 *Part 70 Program* - The discharge of PM (particulate matter) to the atmosphere will not exceed the limits specified in **Section VII.B.1**of this operating permit.
      iv. NAC 445B.22017 Federally Enforceable SIP Requirement – The opacity from **PF1.049** will not equal or exceed 20%.
   b. New Source Performance Standards (NSPS) – Subpart LL – Standards of Performance for Metallic Mineral Processing Plants (40 CFR Part 60.380)
      On and after the sixtieth day after achieving the maximum production rate at which **PF1.049** will be operated, but not later than 180 days after initial startup, the permittee will not discharge or cause the discharge into the atmosphere, the following pollutants in excess of the following specified limits:
      i. Process fugitive emissions from **PF1.049** will not exceed 10 percent opacity (40 CFR Part 60.382(b).
      ii. The opacity standard set forth in this part shall apply at all times except during periods of startup, shutdown, and malfunction (40 CFR Part 60.11(c)).
      iii. At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate **PF1.049**, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions (40 CFR Part 60.11(d)).

3. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Operating Parameters
   a. The maximum allowable throughput rate for **PF1.049** and **PF1.050** combined will not exceed **1000.0** tons of **as fed ore** per any one-hour period as specified in **Section VII.B.2** of this operating permit.
   b. The maximum annual throughput rate for **PF1.049** and **PF1.050** combined will not exceed **3,000,000.0** tons of **as fed ore** per year, based on a 12-month rolling period, as specified in **Section VII.B.2** of this operating permit.
   c. Hours
      PF1.049 may operate **8760** hours per year.

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VI. Specific Operating Conditions (continued)

CI1. Emission Units # PF1.049 (continued)

4. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   a. Monitoring, Record keeping and Compliance
   The Permittee, upon issuance of this operating permit will:
      i. Monitor and record the throughput rate of as fed ore for **PF1.049** at the belt scale located at **S2.223** on a daily basis.
      ii. Monitor and record the hours of operation for **PF1.049**, on a daily basis.
      iii. Monitor and record the throughput rate of as fed ore for **PF1.049**, on a cumulative monthly basis, for each 12-month rolling period.
      iv. Conduct and record a weekly visible emission inspection on **PF1.049**; record the time of the survey and indicate whether any visible emission that is not normal for the process, was observed. If any visible emissions are observed, conduct and record a Method 9 visible emissions test within 24 hours and perform any necessary corrective actions. The Method 9 visible emissions test will be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A, Method 9.
      v. The required monitoring established in (i.) through (iv.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.049** are operating:
         a. The calendar date of any required monitoring.
         b. The total daily throughput rate of as fed ore, in tons, for the corresponding date.
         c. The total daily hours of operation for the corresponding date.
         d. The corresponding average hourly throughput rate of as fed ore, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
         e. The cumulative monthly throughput rate of as fed ore, for each 12-month rolling period.
         f. Results and verification of the weekly visible emissions survey, and documentation of any Method 9 visible emission tests that were undertaken, including all documents required under 40 CFR Part 60, Appendix A.

5. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Shielded Requirements
   No Shielded Requirements

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VI. Specific Operating Conditions (continued)

CI2. Emission Units # PF1.050 North 4515.36 km, East 567.70 km, UTM (Zone 11, NAD 83)

CI2. System 87b – Ore Stockpile Drops (Added on December 6, 2007)		
PF	1.050	Inclined belt feeder discharge to oversize stockpile

1. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Air Pollution Control Equipment
   a. **PF1.050** has no add on controls.

2. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Emission Limits
   a. On and after the date of startup of **PF1.050**, the permittee will not discharge or cause the discharge into the atmosphere from **PF1.050**, the following pollutants in excess of the following specified limits:
      i. NAC 445B.305 *Part 70 Program* - The discharge of PM_{10} (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed the limits specified in **Section VII.B.1**of this operating permit.
      ii. NAC 445B.22033 Federally Enforceable SIP Requirement – The maximum allowable discharge of PM_{10} to the atmosphere will not exceed **77.59** pounds per hour.
      iii. NAC 445B.305 *Part 70 Program* - The discharge of PM (particulate matter) to the atmosphere will not exceed the limits specified in **Section VII.B.1**of this operating permit.
      iv. NAC 445B.22017 Federally Enforceable SIP Requirement – The opacity from **PF1.050** will not equal or exceed 20%.
   b. New Source Performance Standards (NSPS) – Subpart LL – Standards of Performance for Metallic Mineral Processing Plants (40 CFR Part 60.380)
      On and after the sixtieth day after achieving the maximum production rate at which **PF1.050** will be operated, but not later than 180 days after initial startup, the permittee will not discharge or cause the discharge into the atmosphere, the following pollutants in excess of the following specified limits:
      i. Process fugitive emissions from **PF1.050** will not exceed 10 percent opacity (40 CFR Part 60.382(b).
      ii. The opacity standard set forth in this part shall apply at all times except during periods of startup, shutdown, and malfunction (40 CFR Part 60.11(c)).
      iii. At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate **PF1.050** including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions (40 CFR Part 60.11(d)).

3. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Operating Parameters
   a. The maximum allowable throughput rate for **PF1.049** and **PF1.050** combined will not exceed **1000.0** tons of **as fed ore** per any one-hour period as specified in **Section VII.B.2** of this operating permit.
   b. The maximum annual throughput rate for **PF1.049** and **PF1.050** combined will not exceed **3,000,000.0** tons of **as fed ore** per year, based on a 12-month rolling period, as specified in **Section VII.B.2** of this operating permit.
   c. Hours
      PF1.050, may operate **8760** hours per year.

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VI. Specific Operating Conditions (continued)

CI2. Emission Units # PF1.050 (continued)

4. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   a. Monitoring, Record keeping and Compliance
   The Permittee, upon issuance of this operating permit will:
      i. Monitor and record the throughput rate of as fed ore for **PF1.050** as the bucket loads at **PF1.050** on a daily basis.
      ii. Monitor and record the hours of operation for **PF1.050**, on a daily basis.
      iii. Monitor and record the throughput rate of as fed ore for **PF1.050**, on a cumulative monthly basis, for each 12-month rolling period.
      iv. Conduct and record a weekly visible emission inspection on **PF1.050**; record the time of the survey and indicate whether any visible emission that is not normal for the process, was observed. If any visible emissions are observed, conduct and record a Method 9 visible emissions test within 24 hours and perform any necessary corrective actions. The Method 9 visible emissions test will be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A, Method 9.
      v. The required monitoring established in (i.) through (iv.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.050** are operating:
         a. The calendar date of any required monitoring.
         b. The total daily throughput rate of as fed ore, in tons, for the corresponding date.
         c. The total daily hours of operation for the corresponding date.
         d. The corresponding average hourly throughput rate of as fed ore, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
         e. The cumulative monthly throughput rate of as fed ore, for each 12-month rolling period.
         f. Results and verification of the weekly visible emissions survey, and documentation of any Method 9 visible emission tests that were undertaken, including all documents required under 40 CFR Part 60, Appendix A.

5. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Shielded Requirements
   No Shielded Requirements

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section VII. Emission Caps

A. **Cap for Emission Units S2.120 - S2.156 (Roaster "Umbrella" Units)**

1. Emission Limits

When operating under the provisions of Part A of this Section, the emission limits and fuel consumption limits specified in **AP.2** of Section VI of this operating permit do not apply for those pollutants limited under this paragraph. On and after the date of startup of **S2.120 - S2.156, S2.120A – S2.156A,** and during periods specified by Permittee as operating under the provisions of Part A of this Section, the permittee will not discharge or cause the discharge into the atmosphere from **S2.120 – S2.156 combined**, the following pollutants in excess of the following specified limits:

a. The combined discharge of **PM_{10}** (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed more than **129.54** tons per year, based on a 12-month rolling period.
b. The combined discharge of **PM** (particulate matter) to the atmosphere will not exceed more than **129.54** tons per year, based on a 12-month rolling period.
c. The combined discharge of **SO_2** (sulfur dioxide) to the atmosphere will not exceed more than **218.61** tons per year, based on a 12-month rolling period.
d. The combined discharge of **NO_x** (nitrogen oxides) to the atmosphere will not exceed more than **214.80** tons per year, based on a 12-month rolling period.
e. The combined discharge of **CO** (carbon monoxide) to the atmosphere will not exceed more than **97.10** tons per year, based on a 12-month rolling period.
f. The combined discharge of **VOC** (volatile organic compounds) to the atmosphere will not exceed more than **35.39** tons per year, based on a 12-month rolling period.

2. Monitoring, Recordkeeping, Reporting and Compliance

a. Permittee shall demonstrate compliance with the annual emissions cap in **Section VII.A.1. a. through f.** of this operating permit by multiplying the most recent tested pound per hour emission rate as established in **Sections VI. AP. through Sections VI. AX.**, by the operating hours per day for **S2.120 – S2.156** to obtain a daily emission rate in units of pounds per day. Permittee shall then add the pounds per day for **S2.120 – S2.156** each day to get a monthly total in pounds per month. Permittee shall then convert the monthly emission rate to units of tons per month. Permittee shall total the emission rates from all stacks for a cumulative monthly total (in tons); then the Permittee shall add the cumulative monthly total (in tons) to that of the previous 11 months cumulative total (in tons) to obtain a rolling 12-month emission total.

B. **Cap for Emission Units PF1.049 and PF1.050 (System 87a and System 87b)**

1. Emission Limits

On and after the date of startup of **PF1.049 and PF1.050,** and during periods specified by Permittee as operating under the provisions of Part B of this Section, the permittee will not discharge or cause the discharge into the atmosphere from **PF1.049 and PF1.050 combined**, the following pollutants in excess of the following specified limits:

a. NAC 445B.305 *Part 70 Program* - The combined discharge of **PM_{10}** (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed **0.65** pound per hour, nor more than **0.97** ton per year, based on a 12-month rolling period
b. NAC 445B.305 *Part 70 Program* - The combined discharge of **PM** (particulate matter) to the atmosphere will not exceed **1.37** pounds per hour, nor more than **2.06** tons per year, based on a 12-month rolling period.

2. Monitoring, Recordkeeping, Reporting and Compliance

a. Permittee shall demonstrate compliance with the hourly emissions cap in **Section VII.B.1. a. through b.** of this operating permit by ensuring that the hourly throughput limit of 1000 tons/hr is not exceeded for **PF1.049 and PF1.050** combined.
b. Permittee shall demonstrate compliance with the annual emissions cap in **Section VII.B.1. a. through b.** of this operating permit by ensuring that the annual throughput limit of 3,000,000 tons/yr is not exceeded for **PF1.049 and PF1.050** combined.

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

Section X. Amendments

April 15, 2004 – Minor Revision Application received on February 24, 2004: Added Systems 03a., 03b., & 03c. – Reagent Mix Tanks 1, 2 & 3 for the New Flotation Circuit at Mill 5.

November 7, 2006 – Minor Revision Application (Aircase # 07AP0043) received on July 24, 2006: Increased discharge rate from two lime silos (Systems 63 & 65) and revised PM and PM_{10} emission rates for Systems 62 & 64 resulting in an increase of PM emissions of 0.24 ton per year and an increase of PM_{10} emissions of 0.08 ton per year. Removed Systems 22, 23, 24, 27, 28, 29, 30, 31 & 32 as these systems were never constructed.

March 26, 2007 – Minor Revision Application (Aircase # 07AP0216) received on December 14, 2006: Increased annual fuel useage rate for Acid Plant Start-up Heater (System 45) resulting in annual emissions increases of the following pollutants as follows: PM_{10} = 0.55 tpy, SO_2 = 0.39 tpy, NO_x = 5.59 tpy, CO = 1.40 tpy, VOC = 0.22 tpy.

December 6, 2007 – Minor Revision Application (Aircase # 08AP0040) received on July 30, 2007: Removed two mercury retort furnaces (S2.046.1 and S2.046.2; Added an Underground Metal Removal Plant resulting in annual emissions increases as follows: PM = 6.28 tpy, PM_{10} = 4.4 tpy.

March 19, 2008 – Amend Systems 85, 86, and 87, Underground Ore Metal Removal Plant, to add location East 567.391 km, North 4,515.220.

March 12, 2009 – Minor Revision Application (Aircase # 09AP0139). Add Systems 4A-11A-12A-19A-41A. Revise VOC emissions limits for System 72-73. Revise hourly emission limits, hourly throughput, and annual operating hours for System 81. Annual emissions increases: PM = 12.39 tpy, PM_{10} = 4.46 tpy, VOC = 19.22 tpy.

August 24, 2009 – Minor Revision Application (Aircase # 09AP0291). Add System 88 – Phoenix Prep Room Laboratory Crusher System. Annual emissions increases: PM = PM_{10} = 2.86 tpy.

October 1, 2009 – Administrative Amendment (Aircase # 10AP0082), The address for Newmont Mining Corporation has changed from P.O. Box 669, Carlin, NV 89822 to 1655 Mountain City Highway, Elko, NV 89801.

November 23, 2009 – Open Permit/Revision (Aircase # 10AP0101). Open air permit and correct typographical errors. Change S2.220 to S2.224 (System 4A), change S2.221 to S2.225 (System 11A), change PF1.048 to PF1.051 (System 12A), change PF1.049 to PF1.052 (System 19A).

January 22, 2010 – Change of Location (Aircase #10AP0127). Revise locations for System 83 to 567.652 km E, 4514.806 km N; revise locations for Systems 85, 86 and 87, to 567.700 km E, 4515.362 km N.

January 26, 2011 – Minor Revision Application (Aircase #10AP0177). Revise System 81 – remove flux mixer (S2.040), add riffle splitter (S2.232). No increase in emissions.

November 1, 2011 – Change of Location (Aircase #12AP0152). Additional location for Systems 11 and 12 (North 4513.237 km, East 569.462 for System 11, and North 4513.239 km, East 569.464 km for System 12). New location for System 04 (North 4515.586 km, East 566.392 km).

April 30, 2012, Aircase 12AP0239: (1) construct a shotcrete plant with associated silo at the Chukar Underground Mine; (2) remove System 04A from permit.

July 24, 2012 Minor Revision Application (Aircase # 12AP0351) – Addittion of System 99 Met Lab Bucking Room

August 29, 2012 Change of Location (Aircase #7114) Additional location for Systems 01, 02, 11, 12 and 16. (North 4512.57 km, East 569.62 km)

May 15, 2013 Minor Revision Application (Aircase #7402) – Replacement of Wet Scrubber in System 3, removed S2.013 – Lime Silo Unloading, from System 03, since the silo is no longer in use. Changed the Wet Scrubber designation from 2300-DC-02 to 2300-DC-03.

July 17, 2013 Change Location (Aircase #7565) Additional location for Systems 11 and 12 (North 4514.21 km, East 570.18 km)

October xx, 2013 Minor Revision Application (Aircase #7542) – Annual throughput increase requested for Systems 85 and 87 from 1,500,000 tons/yr to 3,000,000 tons/yr; PM/PM10 yearly emissions increased due to this increase; NAC445B.22033 calculated incorrectly for System 86 previously, the corrected maximum allowable emission rate included with this revision. System 87 has been split into two separate System (System 87a and System 87b) and is now subject to an emissions cap set for in Section VII.B.

BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0002 *Permit No.* AP1041-0793.01

CLASS I AIR QUALITY OPERATING PERMIT

SPECIFIC OPERATING REQUIREMENTS

Issued to: Newmont Mining Corporation – Gold Quarry Operations Area, hereinafter called the permittee

This permit:

1. **Is non-transferable. (NAC 445B.287)** ***Part 70 Program***
2. **Will be posted conspicuously at or near the stationary source. (NAC 445B.318)(State Only Requirement)**
3. **Will expire and be subject to renewal five (5) years after the issuance date of** ***February 25, 2004*** **NAC 445B.315)** ***Part 70 Program***
4. **A completed application for renewal of an operating permit must be submitted to the director on the form provided by him with the appropriate fee at least 180 calendar days before the expiration date of this operating permit. (NAC 445B.323.2)** ***Part 70 Program***
5. **Any party aggrieved by the Department's decision to issue this permit may appeal to the State Environmental Commission (SEC) within ten days after the date of notice of the Department's action. (NRS 445B.340)(State Only Requirement)**

THIS PERMIT EXPIRES ON: ***February 25, 2009***

Signature _____

Jeffrey Kinder, P.E.
Issued by: Supervisor, Permitting Branch
Bureau of Air Pollution Control

Phone: (775) 687-9475 Date: **October xx, 2013**

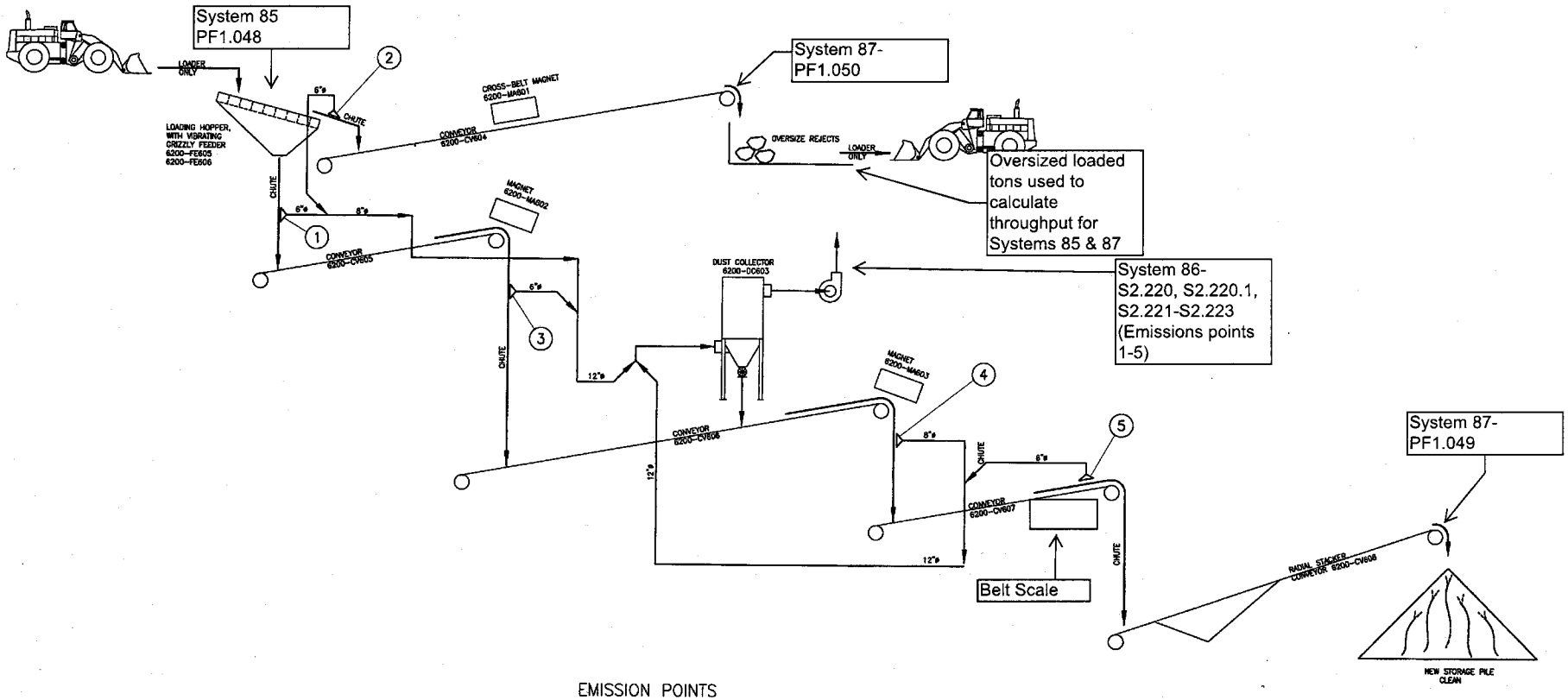
Rm
Revised: 4/15/2004, 11/07/2006, 3/26/2007, 12/6/2007, 3/19/2008 Rp 3/12/2009, 8/24/2009, 11/23/2009 Ja 10/01/2009 gm 1/22/2010, 1/26/2011, 11/1/2011, 4/30/2012
sas
5/2012, 05/2013, 07/2013, 10/2013

Appendix 2

Process Flow Diagram

Newmont Mining Corporation – Gold Quarry Operations Area

October 2013



EMISSION POINTS

System 85 throughput = oversize loaded tons +belt scale tons

System 86 throughput = belt scale tons

System 87 throughput = oversized loaded tons + belt scale tons

ROBERTS & SCHAEFER Company
ENGINEERS AND CONTRACTORS
CHICAGO - SALT LAKE CITY

MRP
PLANT FLOW SHEET
NEWMONT MINING CORPORATION
MRP RELOCATION PROJECT

6914-PI001

FOR INFORMATION ONLY

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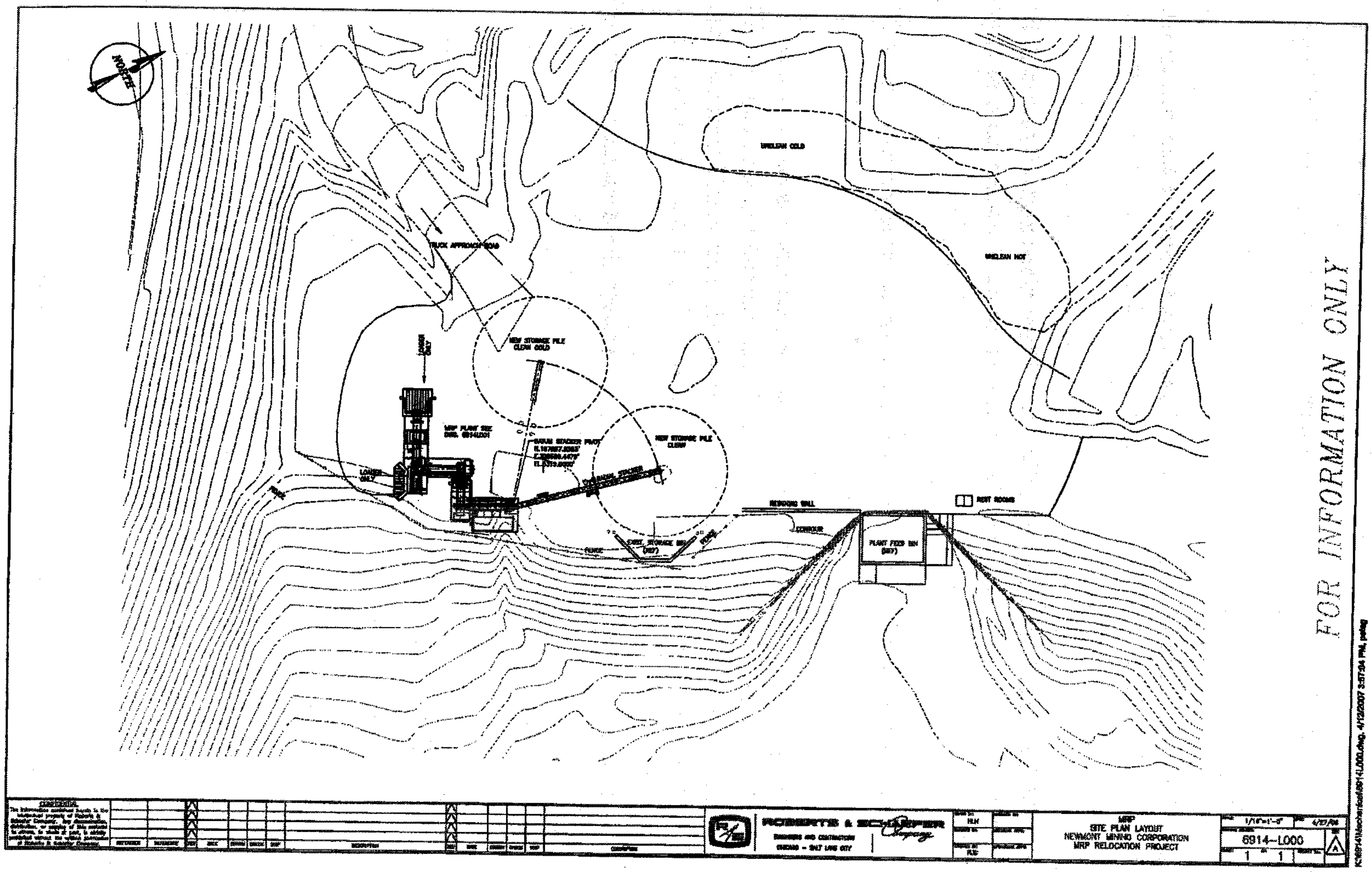
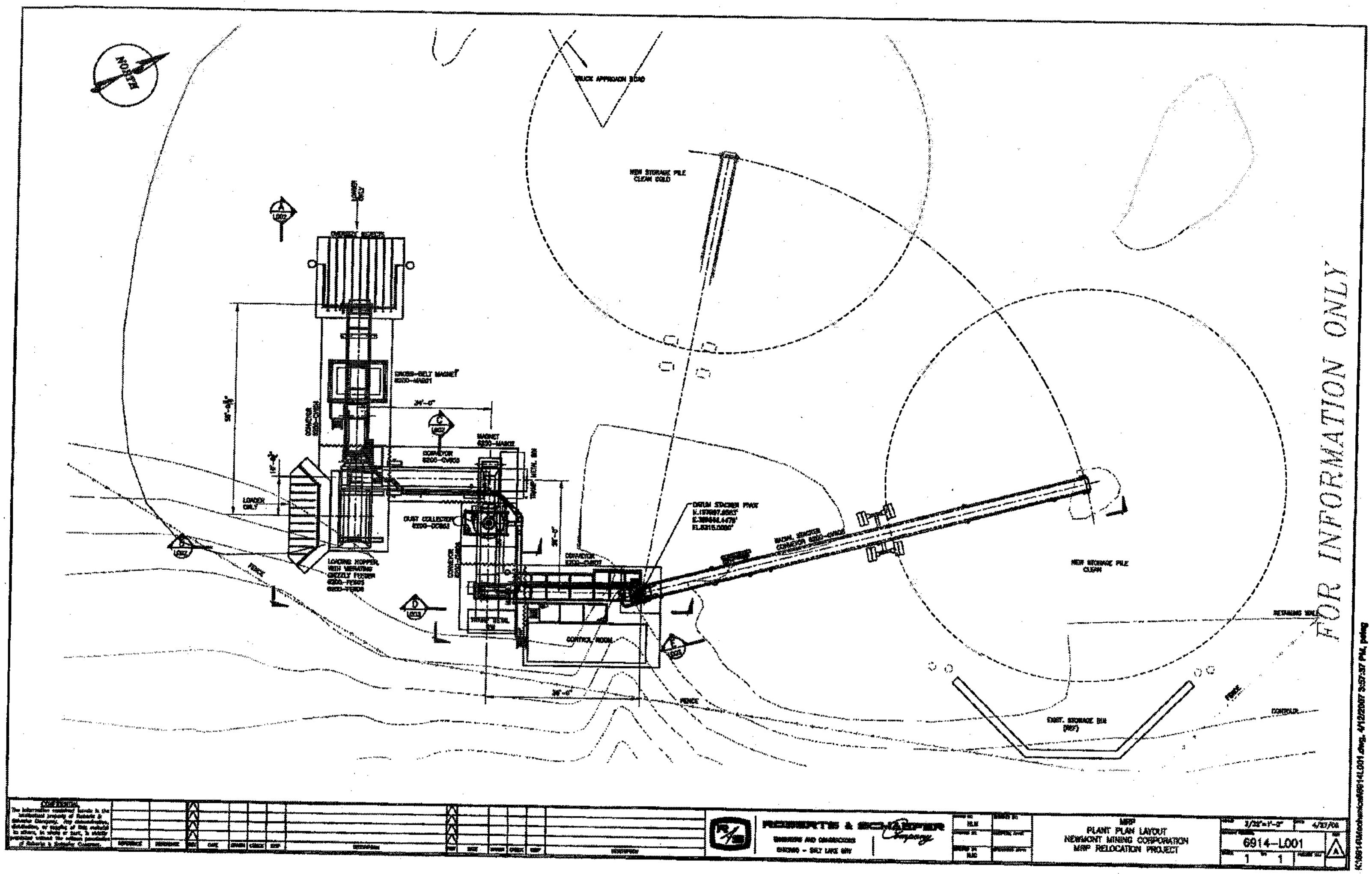
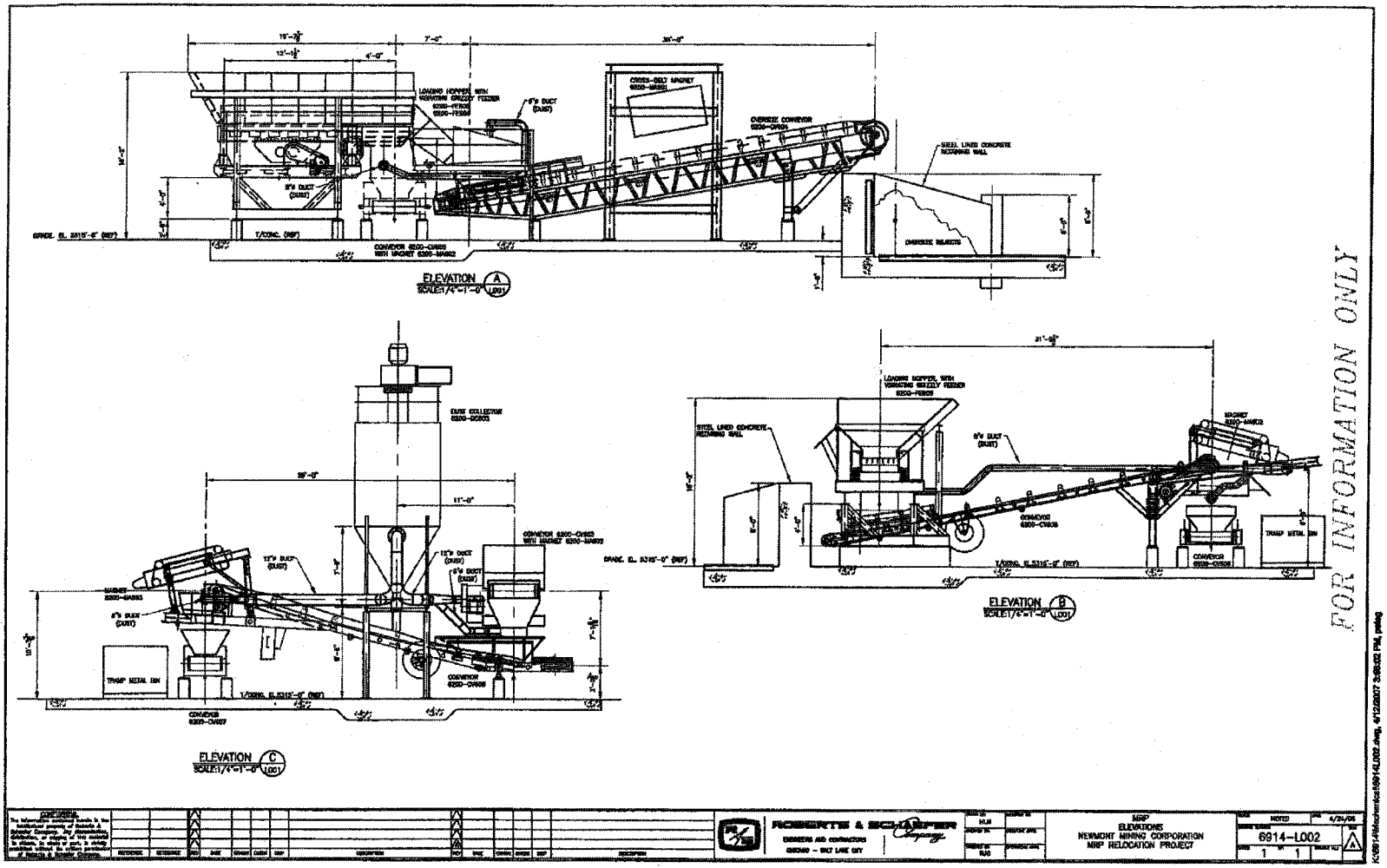

FOR INFORMATION ONLY
NORTH
TRUCK APPROACH ROAD
NEW STORAGE PILE CLEAN GOLD
NEW STORAGE PILE CLEAN
MRP PLANT SEE DWG. 6914L001
LOADER ONLY
UNCLEAN GOLD
UNCLEAN NOT
RETAINING WALL
CONTOUR
PLANT FEED BIN
REST ROOMS
FENCE
ROBERTS & SCHAEFER
MRP
SITE PLAN LAYOUT
NEWMONT MINING CORPORATION
MRP RELOCATION PROJECT
6914-L000


FOR INFORMATION ONLY
NORTH
TRUCK APPROACH ROAD
NEW STORAGE PILE CLEAN COLD
NEW STORAGE PILE CLEAN
CROSS-BELT MAGNET 6200-MAG01
MAGNET 6200-MAG02
CONVEYOR 6200-CV003
DUST COLLECTOR 6200-DC002
DRUM STACKER PIVOT
RADIAL STACKER CONVEYOR
LOADING HOPPER, WITH VIBRATING GRIZZLY FEEDER
CONTROL ROOM
FENCE
EXIST. STORAGE BIN (REF)
RETAINING WALL
CONTOUR
LOADER ONLY
24'-0"
36'-0"
MRP
PLANT PLAN LAYOUT
NEWMONT MINING CORPORATION
MRP RELOCATION PROJECT
ROBERTS & SCHAEFER Company
ENGINEERS AND CONTRACTORS
CHICAGO - SALT LAKE CITY
3/32"=1'-0"
4/27/05
6914-L001
K:\6914\Mechanical\6914L001.dwg, 4/12/2007 3:57:37 PM, jwing



FOR INFORMATION ONLY

ROBERTS & SCHAEFER Company
ENGINEERS AND CONTRACTORS
CHICAGO - SALT LAKE CITY

MRP
ELEVATIONS
NEWMONT MINING CORPORATION
MRP RELOCATION PROJECT

6914-L002

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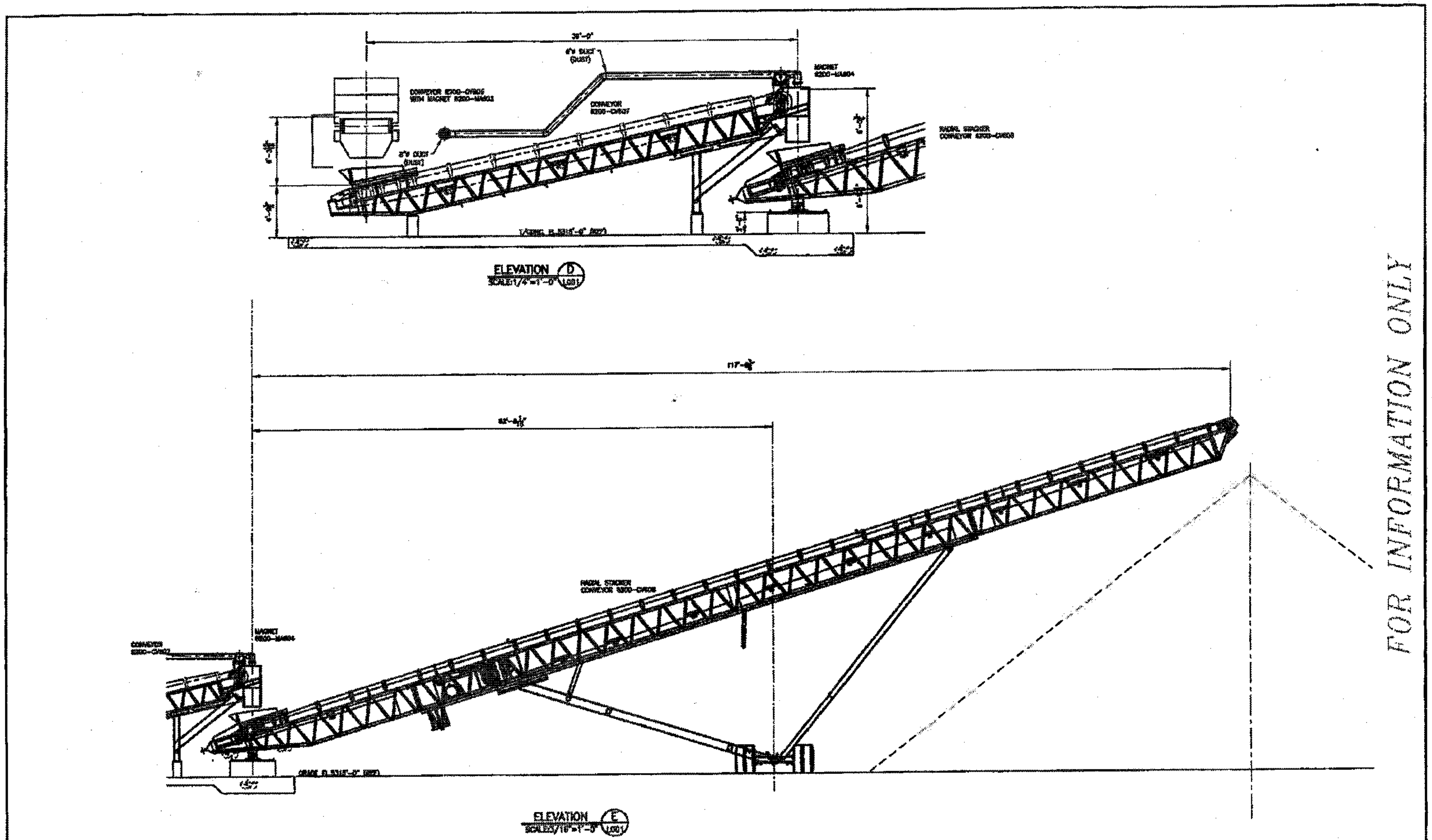
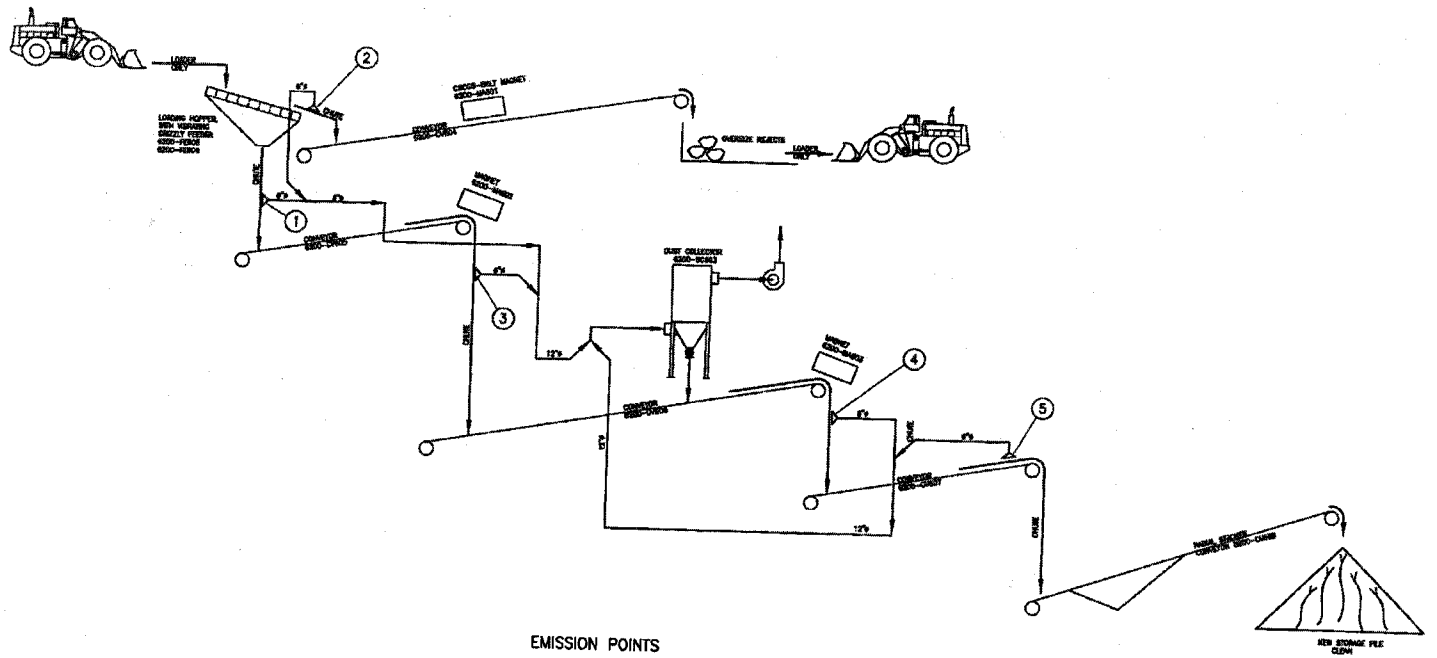


ROBERTS & SCHAEFER Company	ENGINEERS AND CONTRACTORS CHICAGO - SALT LAKE CITY
MRP ELEVATIONS NEWMONT MINING CORPORATION MRP RELOCATION PROJECT	6914-L003



EMISSION POINTS

FOR INFORMATION ONLY

ROBERTS & SCHAEFER Company

MRP
PLANT FLOW SHEET
NEWMONT MINING CORPORATION
MRP RELOCATION PROJECT

6914-PI001

1 of 1

Appendix 3

Emission Spreadsheets

Newmont Mining Corporation – Gold Quarry Operations Area

October 2013

Proposed Particulate Emissions Inventory for Newmont Mining Corporation, Gold Quarry - Permit No. AP1041-0793
PM & PM10 Emissions Calculations

System #	Permit #	Source #	Source Description	Process Rate (ton/hr)	Process Rate (ton/yr)	Operating Hours (hr/yr)	Emission Factor (lb/ton) TSP	Emission Factor (lb/ton) PM10	Particulate Control Technology	Control Efficiency	Flow Rate (dscfm)	Grain Loading, (gr/dscf)	Calculated Emissions (lb/hr) TSP	Calculated Emissions (lb/hr) PM10	Calculated Emissions (ton/year) TSP	Calculated Emissions (ton/year) PM10	Emission Factor Reference
85	-0793	Underground Ore Receiving System															
		PF 1.048	ROM Discharge to vibratory grizzly	1,000	3,000,000	8,760	0.0013711	0.0006485	Underground	0%	-	-	1.3711	0.6485	2.0566	0.9727	
86	-0793	Underground Ore Metal Removal Plant															
		S 2.220	Vibratory grizzly and discharge undersize to metal removal conveyor #1	1,000	1,500,000	8,760			Baghouse (MRB-1)	-	-	-	-	-	-	-	
		S 2.220.1	Vibratory grizzly discharge to oversize inclined belt feeder	1,000	1,500,000	8,760			Baghouse (MRB-1)	-	-	-	-	-	-	-	
		S 2.221	Metal removal conveyor #1 and discharge to metal removal conveyor #2	1,000	1,500,000	8,760			Baghouse (MRB-1)	-	-	-	-	-	-	-	
		S 2.222	Metal removal conveyor #2 and discharge to transfer conveyor #3	1,000	1,500,000	8,760			Baghouse (MRB-1)	-	-	-	-	-	-	-	
		S2.223	Transfer conveyor #3 and discharge to radial stacker	1,000	1,500,000	8,760			Baghouse (MRB-1)	-	-	-	-	-	-	-	
		System Total								-	9056	0.02185	0.7760	0.7760	3.3900	3.3900	
87	-0793	Ore Stockpile Drops															
		PF 1.049	Radial stacker and discharge to undersize stockpile	500	1,500,000	8,760	0.0013711	0.0006485	None	0%	-	-	0.6855	0.3242	1.0283	0.4864	
		PF 1.050	Inclined belt feeder and discharge to oversize stockpile	500	1,500,000	8,760	0.0013711	0.0006485	None	0%	-	-	0.6855	0.3242	1.0283	0.4864	
		System Total								-	-	-	1.371	0.648	2.057	0.973	
Total PM and PM10 Emissions													703.16	96.17	516.46	336.92	

PSD Anlaysis (PM) BAE and PAE emissions (System 85 and 87) based on AP-42 13.2.4: E = k(0.0032)*(((U/5)^1.3)/((M/2)^1.4)) [lb/ton]
Where: U = 6 mph, M = 3.5% k = 0.74 (PM), 0.35 (PM10), 0.0032 (PM2.5)
BAE emissions for System 86 based on source test data; PAE emissions based on max grain loading

85

System 85	Hrs	Tons/yr	BAE EF (lb/Ton)	PAE EF (lb/Ton)	Control Efficiency	PM Emissions (tons/Yr)	2011/2012 Avg PM Emissions (BAE)	PAE System 85 (tons/yr)
2011	3020.4	633197	1.37E-03	1.37E-03	0%	0.43	0.62	2.06
2012	5712.6	1171052	1.37E-03	1.37E-03	0%	0.80		

87

System 87	Hrs	Tons/yr	BAE EF (lb/Ton)	PAE EF (lb/Ton)	Control Efficiency	PM/PM_{10} Emissions (tons/Yr)	2011/2012 Avg PM Emissions (BAE)	PAE System 87 (tons/yr)
2011	3020.4	633197	1.37E-03	1.37E-03	0%	0.43	0.62	2.06
2012	5712.6	1171052	1.37E-03	1.37E-03	0%	0.80		

86

System 86	Hrs	Tons/yr	BAE EF (lb/hr)	PAE EF (lb/hr)	Control Efficiency	PM Emissions (tons/Yr)	2011/2012 Avg PM Emissions (BAE)	PAE System 86 (tons/yr)
2011	3020.4	633197	3.08E-01	7.76E-01	0%	0.47	0.67	3.40
2012	5712.6	1171052	3.08E-01	7.76E-01	0%	0.88		

PM

BAE=	1.91
PAE=	7.51
PAE - BAE =	5.60

Total PAE - BAE=	5.60
PSD Significance threshold (PM)=	**25**
	Pass

PSD Anlaysis:	BAE and PAE emissions (System 85 and 87) based on AP-42 13.2.4: E = k(0.0032)*(((U/2.2)^1.3)/((M/2)^1.4)) [lb/ton]
PM10	Where: U = 6 mph, M = 3.5% k = 0.74 (PM), 0.35 (PM10), 0.0032 (PM2.5)
	BAE emissions for System 86 based on source test data; PAE emissions based on max grain loading

85

System 85	Hrs	Tons/yr	BAE EF (lb/Ton)	PAE EF (lb/Ton)	Control Efficiency	PM10 Emissions (tons/Yr)	2011/2012 Avg PM10 Emissions (BAE)	PAE System 85 (tons/yr)
2011	3020.4	633197	6.48E-04	6.48E-04	0%	0.21	0.29	0.97
2012	5712.6	1171052	6.48E-04	6.48E-04	0%	0.38		

87

System 87	Hrs	Tons/yr	BAE EF (lb/Ton)	PAE EF (lb/Ton)	Control Efficiency	PM10 Emissions (tons/Yr)	2011/2012 Avg PM10 Emissions (BAE)	PAE System 87 (tons/yr)
2011	3020.4	633197	6.48E-04	6.48E-04	0%	0.21	0.29	0.97
2012	5712.6	1171052	6.48E-04	6.48E-04	0%	0.38		

86

System 86	Hrs	Tons/yr	BAE EF (lb/hr)	PAE EF (lb/hr)	Control Efficiency	PM10 Emissions (tons/Yr)	2011/2012 Avg PM10 Emissions (BAE)	PAE System 86 (tons/yr)
2011	3020.4	633197	3.08E-01	7.76E-01	0%	0.47	0.67	3.40
2012	5712.6	1171052	3.08E-01	7.76E-01	0%	0.88		

PM_{10}

BAE=	1.26
PAE=	5.34
PAE - BAE =	4.09

Total PAE - BAE =	4.09
PSD Significance threshold (PM10)=	**15**
	Pass

PSD Anlaysis:	BAE and PAE emissions (System 85 and 87) based on AP-42 13.2.4: E = k(0.0032)*(((U/2.2)^1.3)/((M/2)^1.4)) [lb/ton]
PM2.5	Where: U = 6 mph, M = 3.5% k = 0.74 (PM), 0.35 (PM10), 0.053 (PM2.5)
	BAE emissions for System 86 based on source test data; PAE emissions based on max grain loading

85

System 85	Hrs	Tons/yr	BAE EF (lb/Ton)	PAE EF (lb/Ton)	Control Efficiency	PM 2.5 Emissions (tons/Yr)	2011/2012 Avg PM2.5 Emissions (BAE)	PAE System 85 (tons/yr)
2011	3020.4	633197	9.82E-05	9.82E-05	0%	0.03	0.04	0.15
2012	5712.6	1171052	9.82E-05	9.82E-05	0%	0.06		

87

System 87	Hrs	Tons/yr	BAE EF (lb/Ton)	PAE EF (lb/Ton)	Control Efficiency	PM 2.5 Emissions (tons/Yr)	2011/2012 Avg PM2.5 Emissions (BAE)	PAE System 87 (tons/yr)
2011	3020.4	633197	9.82E-05	9.82E-05	0%	0.03	0.04	0.15
2012	5712.6	1171052	9.82E-05	9.82E-05	0%	0.06		

86 Where $PM_{2.5} = (0.2826)x(PM_{10})$

System 86	Hrs	Tons/yr	BAE EF (lb/hr)	PAE EF (lb/hr)	Control Efficiency	PM 2.5 Emissions (tons/Yr)	2011/2012 Avg PM2.5 Emissions (BAE)	PAE System 86 (tons/yr)
2011	3020.4	633197	8.70E-02	2.19E-01	0%	0.13	0.19	0.96
2012	5712.6	1171052	8.70E-02	2.19E-01	0%	0.25		

$PM_{2.5}$

BAE=	0.28
PAE=	1.26
PAE - BAE =	0.98

Total PAE - BAE =	0.98
PSD Significance threshold (PM2.5)=	**10**
	Pass

Table 2.6.3-1: Summary of PSD Applicability Analysis

Newmont Mining Corporation - Gold Quarry - June 2013 Application for Minor Revision

Pollutant	PAE (System 85) (tons/yr)	PAE (System 87) (tons/yr)	PAE (System 86) (tons/yr)	BAE (System 85) (tons/yr)	BAE (System 87) (tons/yr)	BAE (System 86) (tons/yr)	Total PEI (tons/yr)	PSD Significance Level (SEI) (tons/yr)
PM	2.06	2.06	3.40	0.62	0.62	0.67	5.60	**25**
PM_{10}	0.97	0.97	3.40	0.29	0.29	0.67	4.09	**15**
$PM_{2.5}$	0.15	0.15	0.96	0.04	0.04	0.19	0.98	**10**

Note: Total PEI for each regulated NSR pollutant is below the PSD Significance Level for that pollutant. Therefore, Gold Quarry's June 2013 application qualifies as a PSD minor revision.